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CLAIMS

1. A fertilizer system for extracting nitrogen compounds and other plant nutrients from exhaust gases of a combustion device, the system comprising:

an exhaust chamber having an inlet and an outlet for receiving the exhaust gases from the combustion device therethrough;

a water injector for injecting water into the exhaust chamber for mixing with the exhaust gases to form a water vapor;

a condensing chamber for condensing said water vapor exiting the exhaust chamber with the exhaust gases to form a condensate solution; and

a collector for collecting said condensate solution from the condensing chamber;

characterised in that said condensate solution being formed comprises water and one or more compounds selected from the group including nitrate, nitrite and ammonium.

2. The system according to Claim 1 wherein there is provided a distribution system for distributing the condensate solution to a planted area.

3. The system according to Claim 2 wherein the condensate solution is fully diverted to the distribution system.

4. The system according to Claim 2 wherein the condensate solution is continuously diverted to the distribution system.

5. The system according to Claim 1 wherein only water is added to the exhaust gases to form the condensate solution.

6. The system according to Claim 1 wherein the combustion device comprises an internal combustion engine.

7. The system according to Claim 2 wherein the distribution system comprises a plant care equipment and wherein the combustion device comprises an engine driving the plant care equipment.

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8. The system according to Claim 7 wherein the plant care equipment comprises a mower.

9. The system according to Claim 2 wherein the distribution system comprises a crop irrigation system and wherein the collector is coupled to communicate with an inlet of an irrigation pump for dispensing the condensate solution into irrigation water passing through the irrigation pump, the combustion device comprising a motor driving the irrigation pump.

10. The system according to Claim 9 wherein the water injector is coupled to an outlet of the irrigation pump whereby the water injected into the exhaust chamber comprises a portion of the water pumped by the irrigation pump.

11. The system according to Claim 9 wherein the condensing chamber includes a condenser core which is cooled by irrigation water passing therethrough.

12. The system according to Claim 2 wherein there is provided a shut-off valve coupled in series between the collector and the distribution system which is arranged to be open only when the distribution system is operating.

13. The system according to Claim 1 wherein the water injector includes a float valve coupled in series therewith, the float valve being supported in the condensing chamber such that the water injector is arranged to inject water into the exhaust chamber in response to a level of condensate in the condensing chamber falling below a prescribed level of condensate.

14. The system according to Claim 1 wherein there is provided a catalytic converter coupled to an inlet of the exhaust chamber for receiving the exhaust gases therethrough prior to the exhaust chamber.

15. The system according to Claim 1 wherein there is provided an air pump for injecting air into the exhaust gases near the water injector.

16. The system according to Claim 1 wherein there is provided

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high voltage arc means for generating an electric arc in a passage through which the exhaust gases pass.

17. The system according to Claim 1 wherein there is provided an electrical field generator surrounding a passage through which the exhaust gases pass.

18. The system according to Claim 1 wherein a portion of water from the injector is diverted to an electrolysis device before injection into the exhaust gases for injecting hydrogen and oxygen into the exhaust gases.

19. The system according to Claim 1 wherein the condensate solution includes nitrite, nitrate, ammonium, sulphur, phosphorus, magnesium, zinc, iron, copper and carbon dioxide as a carbonic acid.

20. A method of fertilizing by extracting nitrogen compounds and other plant nutrients from exhaust gases of a combustion device, the method comprising:

operating a combustion device to produce exhaust gases;

directing the exhaust gases through an exhaust chamber in communication with the combustion device;

injecting water into the exhaust chamber for mixing with the exhaust gases to form a water vapor;

condensing said water vapor exiting the exhaust chamber with the exhaust gases to form a condensate solution comprising water and one or more compounds selected from the group including nitrate, nitrite and ammonium; and

collecting said condensate solution from the condensing chamber.

21. The method according to Claim 20 wherein the condensate solution includes nitrate, nitrite ammonium, sulphur, phosphorus, magnesium, zinc, iron, copper and carbon dioxide as a carbonic acid.

22. The method according to Claim 20 wherein the combustion device comprises a motor of an irrigation pump of an agricultural irrigation system

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and wherein the method includes dispensing condensate from the condensing chamber into irrigation water being pumped through the irrigation pump.

23. The method according to Claim 20 wherein injecting water *into the exhaust chamber comprises directing a portion of the irrigation water being pumped through the irrigation pump into the exhaust chamber.*

24. The method according to Claim 20 including fully diverting the condensate solution for distribution to a designated planted area.

25. The method according to Claim 20 including only adding water to the exhaust gases to form the condensate solution.

26. The method according to Claim 20 wherein the combustion device *comprises an engine driving plant care equipment.*

27. A fertilizer solution comprising the condensate solution formed by the system according to any one of claims 1 to 19.

28. A fertilizer solution comprising the condensate solution formed by the method according to any one of claims 20 to 26.